APPLICATIVE		
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TITLE SHEET

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CONTRACT NUMBER			SUNDSTRAND AEROSPACE REDMOND, WASHINGTON 98073-9701 SUNDSTRAND CORPORATION			
DRAWN	J. Nordstrom	93.7.13				
CHECK			Installation Check Out/Ground Test Procedure			
ENGR	J. Nordstrom	93.7.13	MK-VI Ground Proximity Warning System (GPWS)			
MFG			for Commuter/Corporate Aircraft			
QA			SIZE	CAGE CODE	DWG NO.	REV
APVD	J. Douglas	93/7/13	A	97896	076-0845	
APVD			SCALE: NONE		SHEET 1 OF 17	

(GNDGEN.DOC)

PRECIOUS METAL NA

INDICATOR CODE

SDCF-2102/R-2

REVISION STATUS OF SHEETS INDEX

SHEET NUMBER	REV LTR	ADDED SHEETS				SHEET NUMBER	REV LTR	ADDED SHEETS			
		SHEET NUMBER	REV LTR	SHEET NUMBER	REV LTR			SHEET NUMBER	REV LTR	SHEET NUMBER	REV LTR
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SIZE	CAGE CODE	DWG NO.	REV
A	97896	076-0845	
SCALE: NONE		SHEET 2	

REVISIONS				
SH	REV	DESCRIPTION	DATE	APPROVED

SIZE	CAGE CODE	DWG NO.	REV
A	97896	076-0845	
SCALE: NONE		SHEET 3	

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1 INTRODUCTION

1.1 Purpose:

The purpose of this procedure is to verify that the Mk VI GPWS System is properly installed in the aircraft, that all wiring is correctly interfaced with the Mk VI, and that all GPWS Functions operate as specified, per "Product Specification" Sundstrand Document No. 965-0686-601.

1.2 Effectivity:

STC Aircraft Installation and approval

This procedure, along with the related STC Top Drawing package and all documents referenced within, shall require a FAA witness flight test verification for STC approval.

All subsequent installations

The completed installations of all subsequent aircraft of the same type and installed per the same STC drawing package as above, and have installed the same type Radio Altimeter, Air Data Module, and Glideslope Receiver, shall be verified and approved by the successful completion of this Installation Check Out/Ground Test Procedure. A FAA witness Flight Test is not required.

If an installation does include a different Radio Altimeter, Air Data source, or G/S Receiver other than was originally used on the approved STC, then a FAA witness flight test is required, and the original STC (Sundstrand owned) will be amended to reflect this addition. Contact Sundstrand to negotiate Engineering time and expense. See Installation Design Guide, Sundstrand Doc. No. 060-3942 Section 32.

1.3 REFERENCE DOCUMENTS

*	Sundstrand - Product Specification Doc.	965-0686-601
*	Sundstrand - STC Top Dwg. System Installation - Mk VI GPWS (See Applicable Aircraft Package)	960-XXXX
*	Sundstrand - Installation Design Guide	060-3942
*	Applicable Aircraft Interface Wiring Diagrams	

1.4 GPWS DESCRIPTION

The Mk VI Ground Proximity Warning System is designed to provide alerts and warnings of potential Controlled Flight Into Terrain. The primary component of this warning system is the Ground Proximity Warning Computer (GPWC). The Mk VI GPWS computer is a digitally controlled computer intended to provide these Ground Proximity warnings to the pilot for Commuter/Corporate Aircraft. Data is collected from sensors on the Aircraft and processed to determine if the aircraft is in danger, Visual and aural outputs advise the pilot of dangerous situations and indicate if the system is operational. The Mk VI system is configured for unique aircraft requirements.

1.4.1 Test Procedure Description

This procedure will check out the following

a. The correct wiring interface of the complete GPWS system, including wiring polarity.

b. The correct signal and validity requirements of the following inputs:

Radio Altimeter

Air Data Computer

Glideslope Receiver

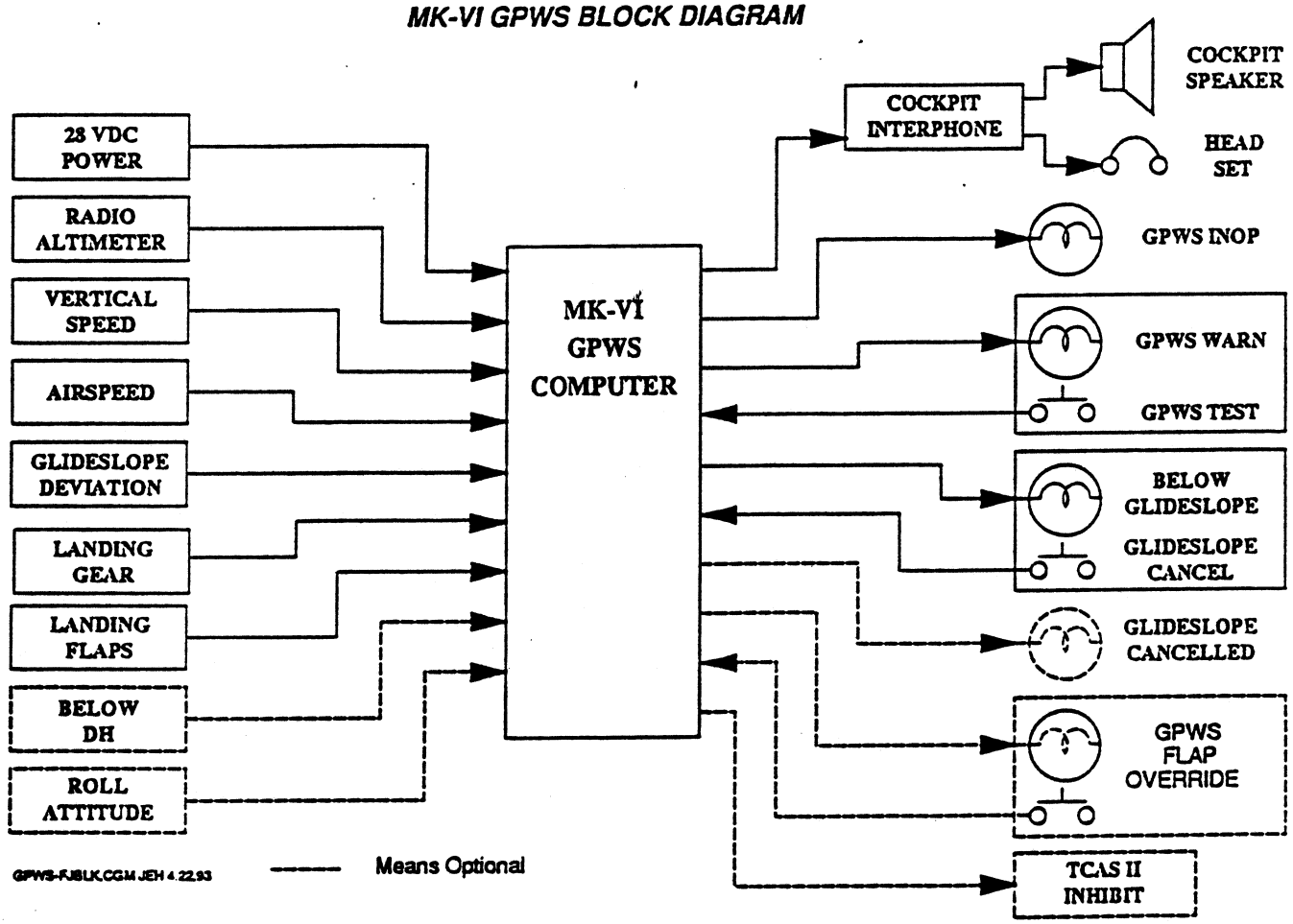
Flap Position Logic

Landing Gear (if applicable)

Vertical Gyro (if applicable)

1.4.2 - Block Diagram

MK-VI GPWS BLOCK DIAGRAM



SIZE	CAGE CODE	DWG NO.	REV
A	97896	076-0845	
SCALE: NONE		SHEET 6	

2 INSTALLATION CHECK OUT

Note: For the following tests in this section, remove the Mk VI GPWS computer, if installed.

2.1 Required Equipment

a. Break-Out Box (BOB)
b. VOM Tester
c. Pitot Static Ramp Tester (used in section 3.0)
d. Ramp Tester for Glideslope System (used in section 3.0)

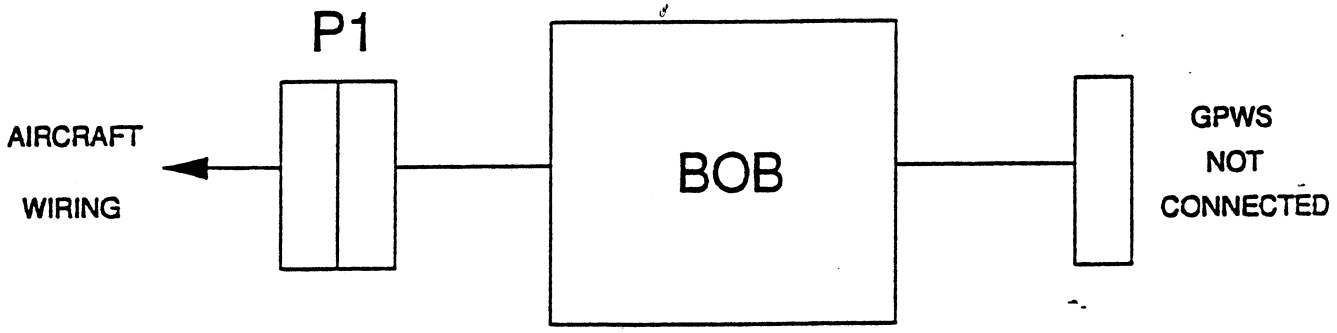
2.2 Continuity Test

Pull all GPWS related Circuit Breakers on the aircraft. All power must be off.

Perform continuity check of every wire as shown on the applicable Wiring Diagram (Part of Top Assy Dwg.) prior to testing described below:

2.3 Ground Test

Connect the Break-Out Box to the (aircraft side) connector for the Mk VI Computer (Do not connect the Mk VI computer at this time). Access points for all test measurements will be test jacks on the BOB. See Figure below:



Perform ground checks per the following:

From	To	Ohms
P1-41	Gnd	∞
P1-61	Gnd	∞
P1-2	Gnd	∞
P1-42	Gnd	∞

2.4 Circuit Breaker Test

Apply power to the aircraft, but pull the following circuit breakers:

GPWS Mk VI
GPWS Annunciator Lights
GPWS Air Data Module

Perform voltage checks per the following:

From	To	Volts
J1-40	J1-41 (GND)	0
J1-60	J1-61 (GND)	0

2.5 Voltage Test

Apply power to the Mk VI GPWS system (without the Mk VI installed) by engaging the following Circuit Breakers:

GPWS Mk VI
GPWS Annunciator Lights
GPWS Air Data Module

Perform voltage checks per the following:

From	To	Volts
J1-40	J1-41 (GND)	+22 to +32 VDC
J1-60	J1-61 (GND)	+22 to +32 VDC
J1-75	Gnd	<250 mVolts
J1-74	Gnd	<250 mVolts
J1-70	Gnd	<250 mVolts
J1-71	Gnd	<250 mVolts

2.6 GPWS Cockpit Lights Test

a. Connect a ground jumper to the Break-Out Box pin J1-72 ("GPWS INOP" light). The cockpit "GPWS INOP" light shall illuminate. Remove jumper.

b. Connect a ground jumper to the Break-Out Box pin J1-78 ("GPWS" Alert light). The "GPWS" Alert light shall illuminate. Remove jumper.

c. Connect a ground jumper to the Break-Out Box pin J1-77 ("Below G/S" light). The cockpit "Below G/S" light shall illuminate. Remove jumper.

d. *If applicable* Connect a ground jumper to the Break-Out Box pin J1-73 ("GPWS FLAP OVRD" light). The cockpit "GPWS FLAP OVRD" light shall illuminate. Remove jumper.

e. *If applicable* Connect a ground jumper to the Break-Out Box pin J1-76 ("G/S CANCELED" light). The cockpit "G/S CANCELED" light shall illuminate. Remove jumper.

f. Light Testing is complete.

2.7 GPWS Cockpit Switch Test

a. Connect the VOM (to read Ohms) Test Set to the Break-Out Box pin J1-34 (*SELF TEST SWITCH*) and ground. Push the Cockpit Self Test Switch while someone observes that the VOM indicates GROUND active for switch input.

b. Connect the VOM Test Set to the Break-Out Box pin J1-14 (*GPWS FLAP OVERRIDE SWITCH*) and ground. Push the Cockpit GPWS FLAP OVERRIDE Switch while someone observes that the VOM indicates GROUND active for the switch input.

c. Connect the VOM Test Set to the Break-Out Box pin J1-15 (*GLIDESLOPE CANCEL SWITCH*) and ground. Push the Cockpit Self Test Switch while someone observes that the VOM indicates GROUND active for switch input.

f. Switch Testing is complete.

2.8 PROGRAM PIN CONFIRMATION TEST

a. Check the Installation interface schematic for the Selectable Program Pins (Options) assigned to this installation. The possible Program pin assignments are as follows:

PIN NUMBER	Ground =	Selectable Option
4	Select	Select Alternate Airspeed Expansion Range
5	Fixed	Fixed Landing Gear
6	Sect. 3	Audio Volume Control #2
7	Disable	200 Ft Altitude Callout
8	Select	Select ALT 55 Scale Factor
24	Invert	Invert Flap Logic
25	Alternate	Alternate Mode 4B
26	Sect. 9.7	Audio Volume Control #1
27	Disable	500 Ft Altitude Callout

b. Connect the VOM Test Set to Break Out Box (MKVI) (Selectable Program Pins) Pins J1-4, 5, 6, 7, 8, 24, 25, 26, or 27 and ground. Confirm that the Selectable Program Pins Assigned to this Installation per the Interface Schematic are grounded.

NOTE: If the Selectable Program Pins are wired in error It will cause much confusion and be very costly during flight test.

3 GROUND TEST PROCEDURE

3.1 Installation

a. Remove all power from the aircraft.

b. Pull the Circuit Breaker labeled "GPWS Mk VI".

c. Slide the Mk VI Computer into the mounting rack.

d. Tighten Hold-Down knob securing Mk VI to rack.

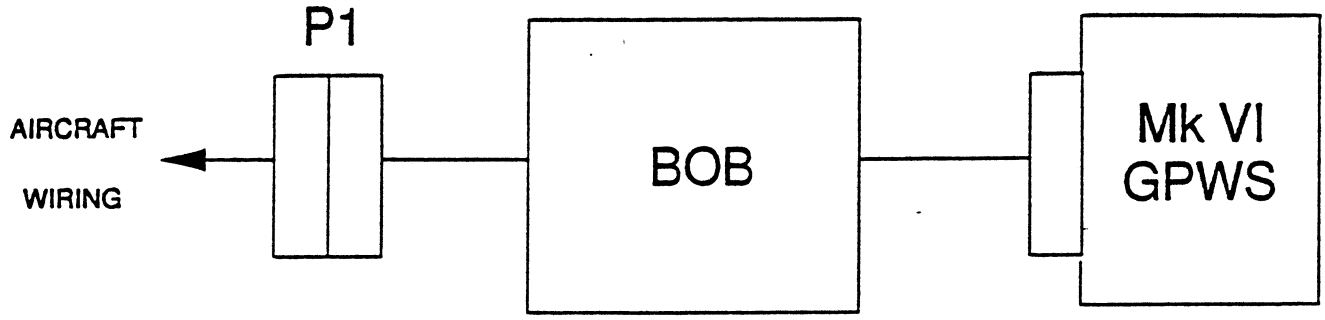
e. Remove protective "J1" connector cover on front of Mk VI Computer.

f. Install the Break-Out Box to connector "J1" See figure below

g. Apply power to the aircraft.

h. Engage the Circuit Breaker labeled "GPWS Mk VI".

i. The GPWS system is now ready for System Activation and Self Test.



3.2 Self Test Check

Note: 1. Assure that the Flaps are in the Up (retracted) Pos. 2. Assure that the Break Out Box (BOB) Gear Switch is in Gear Down Pos. (if applicable) 3. Assure that the Break Out Box (BOB) Radalt Switch is in the Norm Pos. (if applicable).

Press "Self Test" (GPWS Annunciator light in the cockpit) and confirm the system is functional.

Note: Wait a minimum of 6 seconds from the time the Mk VI GPWS Circuit Breaker is engaged and pressing the Self Test Switch.

Normal GPWS Self Test Sequence:

a. Press and Hold GPWS Self Test switch until "Pull Up" is heard.

b. Observe the "GPWS INOP" light comes on immediately.

c. Also observe the "GPWS FLAP OVRD" light comes on immediately, (if installed)

d. Also observe the "G/S Cancel" light comes on immediately, (if installed).

e. Observe the "Below G/S" comes on and remains on.

g. Observe that the Audio System Interphone and/or Speaker annunciates "Glideslope" (one time only) at reduced volume.

h. Observe that the "GPWS Alert Warning" light comes on (after slight delay).

i. Observe that the Audio System Interphone and/or Speaker annunciates "Pull-Up" at least 2 times.

j. When all lights go off after "Glideslope" and "Pull-Up" has annunciated the Self Test is complete with no System Failures.

k. To repeat this Self Test wait 30 seconds before pressing and holding the Self Test Switch.

3.3 Validity Checks

3.3.1 Mk VI Computer

a. Pull the "Mk VI GPWS" Circuit Breaker. The "GPWS light shall illuminate.

b. Engage the "Mk VI GPWS" Circuit Breaker. After a delay (approximately 4 seconds) The "GPWS INOP" light will extinguish. No nuisance GPWS voice warnings shall result lt from this power Off/On cycle. Ignore any other illuminated GPWS lights during this test.

3.3.2 Radio Altimeter

a. Pull the "Radio Altimeter" Circuit Breaker. The "GPWS light shall illuminate within 5 seconds.

b. Press and Hold the "GPWS Self Test" Switch.

c. The fault message "Radar Altimeter Fault" shall be heard.

d. Release the "GPWS Self Test" Switch. Engage the Radio Altimeter Circuit Breaker. There shall be No GPWS warnings during this circuit breaker Off/On cycle.

3.3.3 Air Data Computer

a. Pull the "Air Data" Circuit Breaker. The "GPWS INOP" light shall turn on within 5 seconds.

b. Press and Hold the "GPWS Self Test" switch.

c. The fault message "Baro Rate Fault" shall be heard.

d. Release the "GPWS Self Test switch. Engage the Air Data Circuit Breaker. There shall be No GPWS warnings during this circuit breaker Off/On cycle.

3.4 AUDIO OUTPUT TEST (CONFIRMATION)

a. In the event that the Audio output volume is inadequate. Check the program pin configuration at pins J1-26 and J1-6 per the installation design instructions documentation. Check the applicable Aircraft Interface wiring Diagram for proper signal configuration.

POSSIBLE PROGRAM PIN CONFIGURATION

Pin 26	Pin 6	AUDIO LEVEL
GROUND	GROUND	1/2 WATT
GROUND	OPEN	1 WATT
OPEN	OPEN	2 WATTS (NORMAL)
OPEN	GROUND	4 WATTS

b. Connect the VOM Test Set to the Break-Out Box pin J1-69 (***TCAS OUTPUT***) and ground. Push the Cockpit Self Test Switch while someone observes that the VOM indicates GROUND active during any/all annunciations.

3.5 INPUT SIGNAL SIMULATION

3.5.1 Radio Altitude

The Radio Altitude Flag can be varied by pulling the Radio Altitude Circuit Breaker in the cockpit. The Radio Altitude Decision Height can be varied by adjusting the DH bug on the cockpit Radio Altitude display. A continuity test of the Radio Altitude input signals per the interface wiring diagram should eliminate any aircraft wiring errors.

3.5.2 Altitude and Airspeed

The Altitude and Airspeed signals can be varied by use of a Pitot-Static Test Set. This Test Set should have an accurate Rate of Climb Indicator and a means of precisely adjusting the rate of change of altitude.

3.5.3 Glideslope

The Glideslope signal can be varied by using a Glideslope Ramp Tester or other Glideslope signal source.

3.5.4 Landing Gear

The Landing Gear Up Down signal should be simulated to avoid the necessity of putting the aircraft on jacks.

3.5.5 Flap Position

The Flap Position signal can be checked by normal operation of the Flap System while monitoring the cockpit Flap Position Indicator.

NOTE: Approach Flap Position is 10 Degrees and is activated by Approach Flap Switch (installed). Full Landing Flap Position is activated by the Landing Flap Switch (installed).

CAUTION: Be very careful when moving the Flaps up or down. Make sure that the wing area is clear of personnel, workstands, machinery and/or any other obstruction that would interfere with movement of the Flaps. Only qualified personnel should operate the Flap system.

3.5.6 Attitude (Optional)

Attitude signals, will be provided by the Vertical Gyro or Vertical Gyro Simulator.

Interface wiring for the attitude signals are checked by varying the position of the source that supplies these signals and monitoring the results. Set the Pilots Attitude source selection for Vertical Gyro. The Following are 3 possible methods of varying these input signals.

CAUTION: Be very careful when using these test methods. Avoid making abrupt movements to the gyro. Careless handling of the gyro could have disastrous results.

Method 1 Unbolt the Vertical Gyro from it's mounting. For a Roll change, very carefully lift the right side of the gyro for a roll to the left. Lift the left side of the gyro for a roll to the right.

Method 2 Use a spare gyro to substitute for the gyro installed on the aircraft. Turn off the gyro power. Remove the aircraft interface connector from the on board gyro. Use an extended cable to connect the substitute gyro to the aircraft wiring. Turn power on and wait for the gyro to erect. Adjust the position of the gyro, as described in Method 1.

Method 3 Use a Gyro Simulator. Turn off power to the gyro. Remove the aircraft interface connector and connect it to the Gyro Simulator. Turn power on and adjust the Pitch and Roll sincere dials as required.

3.6 WIRING AND COMPONENT TEST PROCEDURES

a. Activate the system if not activated from previous test section.

b. Press Self Test and confirm that the System is functional.

3.6.1 RADIO ALTIMETER TEST

NOTE: A complete Aircraft GPWS continuity test per the GPWS Aircraft Interface Documentation should have successfully confirmed the Radio Altimeter System wiring.

a. Apply Power to the GPWS and Radio Altimeter System if not activated

b. Connect the VOM Test Set to Break Out Box (MKVI) (RADIO ALTITUDE) Pins J1-64 (+) and J1-45 (-). The VOM should read approximately +0.4 VDC for Zero feet altitude.

c. (Optional) Set the Decision Height value (Radio Altimeter Bug Set) to above the Radio Altitude value. Observe the below DH (Decision Height) discrete BOB Pin J1-33 (Set VOM for Voltage) is not ground.

d. (optional) Set the Decision Height value (Radio Altimeter Bug Set) to below the Radio Altitude value. Observe the below DH (Decision Height) Discrete BOB Pin J1-33 (Set VOM for Voltage) is at ground.

e. Observe the (RA VALID) discrete BOB Pin J1-29 for approximately greater than 12 VDC (VALID)

f. Remove power from the Radio Altimeter System.

g. Observe the (RA VALID) discrete BOB Pin J1-29 for approximately 0 VDC (INVALID)

h. Radio Altitude Testing is complete.

3.6.2 AIR DATA TEST

NOTE: The Baro Rate should be operated with some Pitot Pressure (150 Knots) to protect the Indicators

a. Observe the (BR VALID) discrete BOB Pin J1-9 for approximately 28 VDC (VALID).

b. Connect the VOM Test Set to Break Out Box (MKVI) (BAROMETRIC RATE/VERTICAL SPEED) Pins J1-62 (+) and J1-43 (-). The VOM should read Approximately 0 VDC (or Null Voltage for applicable ADC) for Zero feet/second Baro Rate.

c. Connect the VOM Test Set to Break Out Box (MKVI) (AIRSPEED) Pins J1-63 (+) and J1-44 (-). The VOM should read 0 VDC (or Null Voltage for applicable ADC) for Zero Airspeed.

d. Use the Air Data/Pitot Static Ramp (Test Set) Tester to *INCREASE* the Airspeed value to approximately 150 knots.

e. The VOM should read approximately *(POSITIVE)* 3.33 VDC FOR 150 KNOTS.

f. Connect the VOM Test Set to Break Out Box (MKVI) (BAROMETRIC RATE/VERTICAL SPEED) Pins J1-62 (+) and J1-43 (-). Use the Air Data/Pitot Static Ramp (Test Set) Tester to *INCREASE* the Barometric Altitude to approximately 12,000 feet while observing the VOM. Prepare to stop at the Baro Rates listed below for readings.

g. Use the Air Data/Pitot Static Ramp (Test Set) Tester to *INCREASE* the Barometric altitude and set up a precise *POSITIVE* rate of 3000 FPM while observing the VOM.

h. The VOM should read approximately 1.5 VDC +/- 75 m vdc while the Barometric Altitude is *INCREASING* at this precise rate.

i. Use the Air Data/Pitot Static Ramp (Test Set) Tester to *INCREASE* the Barometric altitude and set up a precise *POSITIVE* rate of 1000 FPM while observing the VOM.

j. The VOM should read .5 VDC (500 m vdc) +/- 25 m vdc while the Barometric Altitude is *INCREASING* at this precise rate.

k Settle the Barometric Altitude to approximately 12,000 feet while observing the VOM. Prepare to stop at the Baro Rates listed below for readings.

l. Use the Air Data/Pitot Static Ramp (Test Set) Tester to *DECREASE* the Barometric altitude and set up a precise *NEGATIVE* decent rate of 3000 FPM while observing the VOM.

m. The VOM should read approximately -1.5 VDC +/- 75 m vdc while the Barometric Altitude is *DECREASING* at this precise rate.

n. Use the Air Data/Pitot Static Ramp (Test Set) Tester to *DECREASE* the Barometric altitude and set up a precise *NEGATIVE* decent rate of 1000 FPM while observing the VOM.

o. The VOM should read -.5 VDC (500 m vdc) +/- 25 m vdc while the Barometric Altitude is *DECREASING* at this precise rate.

p. Return the Airspeed to Zero and the Barometric Altitude to field level. Remove power from the Air Data System.

q. Observe that the (BR VALID) discrete BOB Pin J1-9 is 0 VDC (INVALID)

r. Air Data Testing is complete.

3.6.3 GLIDESLOPE DEVIATION TEST

a. Tune the Aircraft ILS receiver to ILS Ramp (Test Set) Tester frequency

b. Connect the VOM Test Set to Break Out Box (MKVI) (ILS Energize) Pin J1-39 (for 28 VDC active system) or Pin J1-20 (for ground active system). Check the applicable Aircraft Interface wiring Diagram for proper signal configuration. The VOM should indicate True ILS SELECT/ACTIVE for either System.

c. Use the ILS Ramp (Test Set) Tester to provide approximately 2 dots Glideslope Deviation ***ABOVE*** the beam centering.

d. Connect the VOM Test Set to Break Out Box (MKVI) (Glideslope Deviation) Pin J1-65 (+) + UP and J1-46 (-) + DOWN.

NOTE: For system Interfaces that tie J1 65 to ground and use only J1-46 (+) DOWN, Connect Red lead (+) to J1 46 and black lead (-) to J1 65 for proper polarity due to Receivers with a bidirectional single output vs the standard differential output signals.

e. The VOM shall indicate approximately (***POSITIVE***) 0.15 VDC (150mv) for 2 dots ABOVE the beam centering.

f. Observe the (Glideslope VALID) discrete BOB Pin J1-11 for approximately 28 VDC (VALID) or greater than + 160 mv across J1-30 and J1-10 for low level Glideslope Flag System. Check the applicable Aircraft Interface wiring Diagram for proper signal configuration.

g. Select the Manual Backcourse mode on the ILS Ramp (Test Set) Tester.

h. Connect the VOM Test Set to Break Out Box (MKVI) (Backcourse Inhibit) Pin J1-38 (for 28 VDC active system) or Pin J1-19 (for ground active system). Check the applicable Aircraft Interface wiring Diagram for proper signal configuration. The VOM should indicate ***True*** Backcourse ACTIVE for either System.

i. Tune the Aircraft ILS receiver to VOR Ramp (Test Set) Tester frequency.

j. Observe the (Glideslope VALID) discrete BOB Pin J1-11 for approximately 0 VDC (INVALID) or less than 50 mv across J1-30 and J1-10 for low level Glideslope Flag System. Check the applicable Aircraft Interface wiring Diagram for proper signal configuration.

k. Connect the VOM Test Set to Break Out Box (MKVI) (ILS Energize) Pin J1-39 (for 28 VDC active system) or Pin J1-20 (for ground active system). Check the applicable Aircraft Interface wiring Diagram for proper signal configuration. The VOM should indicate ***FALSE*** ILS SELECT/INACTIVE for either System.

l. Glideslope Deviation Testing is complete.

3.6.4 VERTICAL GYRO TEST (IF INSTALLED)

a. With the Vertical Gyro powered up, assure that the VG Flag is pulled.

3.6.4.1 BANK ANGLE AT ZERO FEET RADIO ALTITUDE (IF INSTALLED)

CAUTION: Be very careful when using these test methods. Avoid making abrupt movements to the gyro. Careless handling of the gyro could have disastrous results.

Method 1 Unbolt the Vertical Gyro from it's mounting. For a Roll change, very carefully lift the right side of the gyro for a roll to the left. Lift The left side of the gyro for a roll to the right.

a. Slowly increase the BANK ANGLE per Method 1, 2 or 3 (reference section 5.1.6) to the right side approximately 18 degrees until the speaker begins annunciating "BANK ANGLE" messages approximately every three seconds.

NOTE: All STATUS INDICATOR LIGHTS remain off for a bank angle alert.

b. Slowly increase the BANK ANGLE per Method 1, 2 or 3 (reference section 5.1.6) to the left side approximately 18 degrees until the speaker begins annunciating "BANK ANGLE" messages approximately every three seconds.

c. Vertical Gyro Testing is complete.

3.6.5 LANDING GEAR TEST

a. The Landing Gear Up Down signal should be simulated to avoid the necessity of putting the aircraft on jacks.

b. Use Extreme caution while doing these Tests to prevent damage to the Aircraft landing gear system.

c. Remove the Landing Gear down signal (pull the input signal pin or connector) from the MK-VI interface.

CAUTION! DO NOT SELECT GEAR UP!

d. Connect the VOM Test Set to Break Out Box (MKVI) (GEAR DOWN) Pin J1-35 (for 28 VDC active system) or Pin J1-16 (for ground active system). Check the applicable Aircraft Interface wiring Diagram for proper signal configuration. The VOM should indicate ***FALSE*** (GEAR UP/INACTIVE) for either System.

e. Return the Landing Gear signal (connect the input signal to the MK-VI interface) to the Gear down state.

f. Landing Gear Testing is complete.

3.6.6 FLAP INPUT TEST

a. Connect the VOM Test Set to Break Out Box (MKVI) (FLAPS UP) Pin J1-37 (for 28 VDC active system) or Pin J1-18 (for ground active system). Check the applicable Aircraft Interface wiring Diagram for proper signal configuration. The VOM should indicate ***TRUE*** (FLAPS UP/ACTIVE) for either System.

NOTE: If the above indicated a reverse state for this installation, check the Flap position program pin configuration, J1-24 Invert Flap logic. Check the applicable Aircraft Interface wiring Diagram for proper signal configuration.

CAUTION: Be very careful when moving the Flaps up or down. Make sure the wing area is clear of personnel, workstands, machinery and/or other obstructions that would interfere with movement of the Flaps. Only qualified personnel should operate the Flap system.

b. Select progressively greater Flap positions while noting the VOM indication at J1-37 or J1-18 (whichever the case) until the signal becomes ***FALSE*** (FLAPS UP/INACTIVE) for either System.

c. Verify Flap position is approximately 35 degrees.

d. Continue selecting a greater Flap positions until ***FULL*** Flaps are selected.

e. Verify that the VOM indication at J1-37 or J1-18 (whichever the case) remains ***FALSE*** (FLAPS UP/INACTIVE) for ALL Flap positions between 35 degrees and the maximum Flap position.

f. Return the Flaps to the original Flaps up state.

g. Flap Input testing is complete

3.6.7 OPTIONAL INPUT OUTPUT TEST

a. Press and hold the Self Test switch and verify a "Glideslope" and "Pull-up" Annunciation.

b. Generate a stall warning situation on the Aircraft.

c. Press and hold the Self Test switch and verify that there is ***No*** "Glideslope" and "Pull-up" Annunciation.

d. Remove the stall warning situation on the Aircraft.

e. Connect the VOM Test Set to Break Out Box (MKVI) (TCAS INHIBIT) Pin J1-69 and ground. The VOM Test Set shall indicate not Ground.

f. Press and hold the Self Test switch and verify a "Glideslope" and "Pull-up" Annunciation, while observing that TCAS Inhibit step "d" above does go to ground during the Annunciation.

4 APPENDIX A - TROUBLESHOOTING FAULT GUIDE

4.1 ABNORMAL (FAULT) SELF TEST

a. The GPWS Status Lamp (INOP) will be on due to the fault.

b. Press and HOLD the GPWS Self Test Switch.

c. Observe that the audio System Interphone and/or speaker annunciates one or more of the following fault messages *ONE TIME* at a reduced volume.

d. Possible fault messages, and their cause are as follows:

MESSAGE -VS- PROBABLE CAUSE

IF INOP LAMP INITIALLY ON:

VOICE MESSAGE	WARNING LAMPS		POSSIBLE CAUSE
	GPWS	G/S	
RADAR ALTIMETER FAULT	OFF	OFF	RADAR ALTIMETER INVALID: RADAR ALT SIGNAL OPEN
RADAR ALTIMETER FAULT - GLIDESLOPE, FOLLOWED BY BANK ANGLE AFTER RELEASING THE SELFTEST SWITCH	OFF	ON	RADAR ALTIMETER (+) SIGNAL OPEN
RADAR ALTIMETER FAULT - GLIDESLOPE	OFF	ON	RADAR ALTIMETER (-) SIGNAL OPEN
GLIDESLOPE FAULT	OFF	OFF	GLIDESLOPE DEV. SIGNAL (+) UP OR (-) DN OPEN
BARORATE FAULT	OFF	ON	BARO ALTITUDE RATE INVALID: BARO ALT. RATE VALID SIGNAL OPEN: BARO ALT. RATE (+) OR (-) SIGNAL OPEN

IF INOP LAMP INITIALLY OFF:

VOICE MESSAGE	WARNING LAMPS		POSSIBLE CAUSE
	GPWS	G/S	
NONE	OFF	ON	RADAR ALT > 50 FT (1.4 VDC)
GLIDESLOPE	OFF	ON	FLAPS IN LANDING CONFIG: BARO ALT RATE > +500 FPM (0.25 VDC)
PULL UP	ON	OFF	GPWC INOP
TOO LOW GEAR	ON	OFF	FAULTY GEAR SWITCH: GEAR SIGNAL OPEN

NOTE: For Internal GPWS faults such as an out-of-tolerance or loss of a power supply no Audio annunciation will be observed. There are other Internal failures that may exhibit one or more of the "NORMAL" test observations and be at fault.

e. To repeat the GPWS FAULT sequence, press the Self Test Switch again after a 1 second delay.